Market reaction to rights offer: A case of Johannesburg Stock Exchange

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ABSTRACT

Firms have at their disposal various sources to meet the capital requirements to fund their growth aspirations to generate sustainable shareholder wealth. Rights issues are key among this compendium of capital sources. This study investigated the short and medium-term market reaction of firms' rights offer announcement event on the share price of Johannesburg Stock Exchange (JSE)-listed firms using an event study methodology to operationalise the research. A univariate *t*-test analysis determined the significance of the market price reaction post-announcement of a rights offer for JSE-listed shares. The cumulative abnormal returns (CAR) were calculated using the market model formula. The significance testing was conducted on the null hypotheses at a 5% significance level. Empirical evidence frequently indicates a significant price drop post-announcement of a rights offer. Studies indicate a general negative price reaction to announcing the rights issue on the JSE due to a dilution in earnings per share, regulation, and effects of floatation costs. This study's results provide a contrarian view with empirical evidence indicating a significantly positive price movement of 2.30%, 2.94%, and 2.56%, respectively, from day three to five post-announcement of a rights offer. However, statistically insignificant negative price movement results were observed in the medium-term (30–252 days). The review period is from January 2006 to January 2020, covering periods from different economic cycles and the most recent data on rights offers. This study contributes to the ongoing assessment on price reaction post announcing a rights offer in the South African market.

Keywords: rights offer, event studies, equity finance, seasoned equity offerings, share price reaction, rights issue, abnormal returns, information asymmetry, operating performance, listing requirements, JSE, corporate announcements

DECLARATION

I, Busisiwe A. Lebepe, declare that this research report is my work, except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in Finance and Investment at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Name: Busisiwe A. Lebepe Signature:

Signed at Amberfield Ridge Centurion

On the 29th day of April 2021

DEDICATION

The wisdom and resilience gained through this journey has cemented knowledge of great substance that has built my character and business acumen. The silent voice in my head that propelled me to complete this research can only be the wonders and works of the Almighty, which I will for forever be grateful to God Almighty for seeing me through this journey.

The influence and motivation in registering for a Master's degree came from the wise words of my uncle (Babomncane) Mr MM Sangweni. He got so worried when I took a decision to get married in my mid-twenties. He blessed our decision but emphasised that an undergraduate degree is only the beginning, "I expect for my daughter to hold a Master's degree and not let the circumstances from a married life take over her reaching such heights". I held those words dear to my heart.

My husband became the pillar and a dedicated support system as we were growing in marriage, business, and academic achievements. He walked the journey with me, including buying books on my behalf, looking after the kids, and being my personal chauffer. He made sure I attend night classes and syndicate meetings, as there are times where doubt can overwhelm your thoughts, seeing that the Business School is a bit far from home. Thank you, Mr IM Lebepe for the love and support.

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ABBREVIATIONS

ALSI	All Share Index
AR	Abnormal Returns
CAAR	Cumulative Average Abnormal Returns
CAPM	Capital Asset Pricing Model
CAR	Cumulative Abnormal Returns
EMH	Efficient Market Hypothesis
IPO	Initial Public Offering
JSE	Johannesburg Stock Exchange (South Africa)
NPL	Nil-Paid-Letter
ROE	Return on Equity
SD	Standard Deviation
SEO	Seasoned Equity Offering

CHAPTER 1

1.1 Introduction

This chapter introduces the thesis, provides a research background, and highlights the research problem and objectives. The chapter is organised as follows: Section 1.2 provides the background of the study, followed by Section 1.3 that discusses the research problem. Section 1.4 outlines the research objectives, and Section 1.5 describes the research contribution. Sections 1.6 and 1.7 indicate the research gap and benefit of the study, respectively. Section 1.8 outlines the organisation of the thesis. The chapter summary concludes this chapter.

1.2 Background of the Study

A rights offer is an unconventional form of capital acquisition directly from existing shareholders because of their pre-emptive right (Van der Linde, 2008). In South Africa, a company's board of directors can issue shares as authorised in the Memorandum of Incorporation by passing an ordinary resolution (Davids, Truter, & Gilfillan, 2016). However, shareholders are afforded several protections to ensure maintaining the value of their shareholdings relative to other shareholders in the same company. One such protection is the pre-emptive rights granted to existing shareholders on shares issues, such that third parties or existing shareholders cannot acquire additional shares, diluting the existing shareholders without them first being offered to maintain their equity percentage shareholding. The pre-emptive rights on a shares issue are found in s.39(2) of the South African Companies Act for private companies or personal liability companies (Davids et al., 2016).

As a protection mechanism for shareholders for a possible loss in value, a discounted subscription price is offered to raise the market value of the right, reducing the probability that at the expiration date of the rights offering, the stock price will be below the subscription price (Smith, 1977). During the rights offer process, a corresponding fall in the market value of stock occurs, but this fall is similar to that of a stock split and does not affect the existing owners of the firm's wealth (Smith, 1977). Massa, Vermaelen and Xu (2013) state that to ensure successful uptake of the rights offer,

companies might need to offer deep discounts and underwriting rights offers as an incentive for capital outlay by shareholders.

Studies have been conducted on rights offers in the context of the market where they are issued. Gwatidzo and Ojah (2009) provided insight on rights offers in capital markets in developing economies of Africa, such as Ghana, Kenya, Nigeria, South Africa, and Zimbabwe. Tsangarakis (1996) provides a view of rights offers in markets in Athens where most listed companies are state or family owned. Bøhren, Eckbo, and Michalsen (1997) studied the Norwegian market reaction to rights offers. Marsden (2000) examined the New Zealand market reaction in a small capital market with different institutional environmental, economic, political, and regulatory structures. Another view was provided in a study on the Tokyo Stock Exchange, examining significant returns following a rights offer (Goyal, Hwang, Jayaraman, & Shastri, 1994)

Market reactions following the rights offer have been a specific focus in previous studies, including the signalling effect of rights offers about both investment and financing (Kabir & Roosenboom, 2003; Lukose & Rao, 2003; Bello, 2016). The resultant expected increase in operational performance post a rights offer has also been significantly studied (Loughran & Ritter, 1997; Pascoe, Ward, & Mackenzie, 2005; Setati, 2013).

The rights offer announcement behavioural effects and market perception are areas of interest that have attracted studies to understand its effect. Asquith and Mullins (1986) indicate that the share price is independent of the number of shares issued. Smith (1977) found that the price reaction following the rights offer is similar to the reaction of the stock price ex-dividend date. A significant price drop over a two-day announcement period and a further fall-in period following the announcement indicate pessimistic investor sentiment (Bhana, 1998).

Recent studies support the negative reaction of share prices in the event window t-60 to t+60 days (Van der Merwe, 2016). However, Seetharam and Da Cunha (2018) found no significant correlation between investor sentiment and the timing of issuing the state-owned enterprise.

The above studies, with time, have influenced the interest in continuing to shed light on the behaviour of share price post rights offers. Given the continuously changing markets due to global events, studying market reactions to rights offers must continue to provide valuable information on the effects of recent transactions that adds to the body of existing research.

1.3 Research Problem

Firms have long relied on the pecking-order theory when choosing how to finance assets and operations. Typically, firms prefer using retained earnings and, if retained earnings are depleted, debt would be preferred over equity because of the desire to retain independence and control (Saiti, 2012). Although this is the case, rights offers are gaining momentum as an alternative funding source, as supported by Bhana (1988), Alston (1996), and Setati (2013), indicating an increasing trend of using this form of raising capital.

Apart from empirical studies, rights issues are a topic of interest in the media and investment fraternity. For example, in a recent budget speech on 20 February 2019, the South African finance minister, Mr Tito Mboweni, stated that the R69bn financial support allocated over three years to a debt-laden power utility Eskom is not a bailout. The minister likened the financial support to a private company embarking on a capital raising exercise using a rights issue where the shareholder, which is the government, would provide a capital injection for the reconfiguration phase of Eskom under strict conditions (Omarjee, 2019). The finance minister opted to use the rights offer analogy terminology to substantiate bailout capital expenditures using public funds.

In another example, an experienced investor and analyst, Simon Brown, wrote a newspaper article in 2017 titled *Rights issues putting investors in a tricky position*. The article illustrates the dilutive effects of a rights offer if a shareholder elects not to participate. The article warns shareholders who opt to not take up a rights issue to sell the option to net some income from the option. The writer further shared some adverse experiences from the Woolworths rights issue that was used to raise money for the acquisition of David Jones, where post the rights issue, the share price ended up being below the take-up price.

Brown (2017) concurs with the point in the study by Massa et al. (2013) that rights offerings do not automatically shield existing shareholders from adverse effects and dilution. Even when rights are traded, the market for them is illiquid, and they are often underpriced. Furthermore, these illiquid markets are dominated by insiders and, as such, low rights prices amplify negative signals. Given the challenge faced by shareholders on whether to participate or not, it ignites the interest to revisit the investigation of the impact of rights offers on share prices.

Empirical evidence continues to shed light on rights offers and effects on market reactions. Holderness and Pontiff (2016) highlight concerns and uncertainty effects from a shareholder perspective by assuming that most shareholders participate in valuable rights offerings. This assumption is unclear, as firms are under no legal obligation to be transparent about participating shareholders in rights offerings. It, therefore, is interesting to investigate whether most shareholders have interests in rights offers because it enhances their value in the company.

The firm's quality also affects cost implications and public perceptions of a company embarking on a rights offer. Saiti (2012) highlights that companies engaging in rights offerings are subject to public scrutiny of the firm's quality. This is often the case for developing companies lacking experience and exposure in the market. Such developing firms have a short track record, associating them with higher uncertainty than older firms that have longer operating histories and face less uncertainty. To compensate investors for value uncertainty for younger firms, investment bankers discount rights offer prices more significantly.

Information asymmetry is another leading factor in studies on firms issuing rights offers where the agency problem is critical between management and shareholders and block owners taking advantage of the minority shareholders. The agency conflict of interest is elaborated by Holderness and Pontiff (2016), and the impact of block owners and rights issues is explained by Saiti (2012).

Other empirical investigations on the effects of issuing a rights offer have generated interest to ascertain the impact of rights issues on the share price performance on the day of the announcement and the long-term effect on the value-add post a rights offer (Bhana, 1988; Alston, 1996; Cotterell, 2012; Setati, 2013). In line with the

announcement event studies, this study focuses on the rights offer event to provide a further view on the market reaction to rights offer announcements in the South African market. Having considered the key challenges associated with issuing of rights offers, such as its dilutive effect, interest in participation, and information asymmetry, this study investigates whether the announcement of the rights offer by JSE-listed firms has a significant impact on the market reaction in the short and medium-term.

1.4 Research Objectives

The objectives of this study are:

- to investigate the market reaction of JSE-listed firms to announcing rights offers in the short-term, and
- to assess the medium-term effect of a rights offer on shareholder value.

1.5 Research Contribution

Some companies might prefer rights offers for several reasons, including addressing different business-cycle issues. The cycles can include expansion programmes, financial obligations, asset acquisitions, or bolster the balance sheet or save the company (Otieno & Ochieng, 2015). Bhana (1988) outlined some reasons for the popularity of rights offers on the JSE, highlighting that the exorbitant prime overdraft rate in South Africa that reached 25% in 1985 allowed listed companies to reduce their debt and substituting it with cheaper equity capital.

Other studies indicate the continued benefit of a right. Ahmet et al. (2012) highlight that right offers in capital structuring are a key option in maximising shareholder wealth. Burkart and Zhong (2018) mention that in the period post the initial public offering (IPO), rights offering was also an available avenue for raising capital. Otieno (2014) emphasised the importance of rights offers as a cheaper means of raising capital compared to bonds and even initial offers.

Numerous studies have addressed the share price reaction on the date of announcing a rights issue. Tan, Chng, and Tong (2002) and Hao 2014 highlighted the share price

reaction from the signalling effect perspective of the seasoned equity offering (SEO) in the form of rights offers. Kabir and Roosenboom (2003) analysed whether management merely used a rights offer to address information asymmetry for overvalued shares.

From the above studies, rights offers can be used for several reasons as a source of capital to create shareholder value. Given the increasing use of rights offers in raising capital, it is important to continue studying the effects it creates in the market. Therefore, this study contributes to the existing body of literature from a rights offer event for JSE-listed shares.

1.6 Research Gap

Using rights offers has been gaining momentum with time in South African markets. Bhana (1988) indicates that in the mid-eighties, R2bn was raised using rights offers. This further increased in the early 1990s from R6.53bn in 1991 to R7.263bn in 1993 (Alston, 1996). In the early 2000s, this form of capital raising continued to increase with R84.9bn raised between January 2005 and January 2013 (Setati, 2013).

Most literature on rights offers has extensively documented rights offers reactions based on US, Asian, and European markets, with limited research in emerging economies, such as South Africa. Although several companies have used right offers as a form of capital injection, this study revisits the rights offer phenomena to assess whether a significant market reaction occurs post announcing a rights offer in the JSE.

This study further adds to the ongoing assessment on price reactions post a rights offer announcement in the South African market. The research period from 1 January 2006 to 31 January 2020 covers different economic cycles before, including the 2008/2009 fiscal crisis, and the most recent data on rights offers.

1.7 Benefit of the Study

This study adds to resourceful academic information on rights offers for JSE-listed shares by assessing share price reactions post a rights offer announcement in the short and medium-term by studying a more recent period. This is to benefit

shareholders at risk of dilution should they not participate in the uptake of the rights offer. Others who stand to benefit are investment bankers who might be interested in the underwriting and sponsorship process and corporate management who seek alternative finance avenues. The study will also be useful to other stakeholders in the finance and investment market who aim to benefit from the reaction of share prices post-announcement. The study further analyses the value of a company and shareholder value post a rights offer.

1.8 Organisation of the Thesis

The thesis is organised as follows: Chapter 2 provides an extensive literature review of rights offers and related topics. Chapter 3 elaborates on the research methodology and design used to achieve the research objectives outlined above. Chapter 4 presents the results, and Chapter 5 discusses the findings and concludes the study.

1.9 Chapter Summary

This chapter elaborated on the study's background by indicating the statutory requirements and definition of a rights offer. The research problem section exposes areas of concern and contentious issues raised in other studies and articles, adding more reason for investigating the impact of rights offers on shareholder value. The rest of the chapter indicated the benefit of the study and the organisation of the thesis.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews previous literature on rights offers. Section 2.2 presents firms' capital structures, including related theories. Section 2.3 discusses seasoned equity offerings (SEOs). Section 2.4 discusses rights offerings, including its benefits and legislative requirements. Section 2.5 presents the market's reaction to rights offers announcements. Section 2.6 outlines factors influencing rights offers. The chapter summary and the research hypothesis conclude the chapter.

2.2 Firm Capital Structure

A firm's capital structure is more than a decision about a mix of debt and equity that a company uses to finance its business (Huang & Knoll, 2000). The capital structure addresses several organisational decision-making processes. According to Ahmad, Abdullah, and Roslan (2012), the capital structure addresses several questions. Which securities should a company issue? What is the mix of debt and equity and the resultant costs? To whom securities should be issued? What rights are attached to the different classes of security holders? Therefore, the objective of all firms is to maximise shareholder wealth, and capital structure decisions are relevant because they can affect shareholder wealth.

Companies use various strategies to maximise a firm's value. A critical capital structure decision strategy is the optimal capital structure where the company chooses the right mix of equity and debt to finance the company's assets (Ahmad et al., 2012). The choice between the two funding methods depends on the cost and benefits associated with each; however, studies have documented factors influencing the capital structure. Bauer (2004) indicated several conditional theories to understand the debt-to-equity structure that firms choose. The study highlighted that these theories are divided into two groups—those predicting the existence of the optimal debt-equity ratio for each firm (static trade-off models) or those declaring that there is no well-defined target capital structure (pecking-order hypothesis). These capital structure theories define the route for management decision-making.

2.2.1 Capital structure theories

This subsection outlines and discusses the three main theories of capital structure, such as the static trade-off, agency cost, and pecking-order theories.

2.2.1.1 Static trade-off theory

Bassey, Arene, and Okpukpara (2014) explained that Myers (1984) developed the static trade-off theory, also called the tax-based theory, proposing that a firm's target leverage is characterised by taxes, financial distress cost, and information asymmetry risks because of agency conflicts. This theory explains the firm's capital structure by illustrating the firm's exposure to bankruptcy and agency cost against the tax benefit associated with using debt.

Bas, Muradoglu, and Phylaktis (2009) proposed that the trade-off theory claims that a firm's optimal debt ratio results from a trade-off between bankruptcy costs and the tax advantage of borrowing. Higher profitability decreases the expected costs of financial distress and allows firms to increase their tax benefits using more debt, increasing leverage. If the financial distress risk is low, firms would prefer debt over equity. Debt financing comes with an obligation for both small and large firms to provide guarantees materialised in collateral. However, small firms face the challenge that they are seen as risky because they have a higher probability of insolvency than large firms. Furthermore, the tax advantage of borrowing can be applied to large firms that are more likely to generate high profits to meet debt obligations. As small firms are less likely to have high profits, debt financing might not be an option for the tax shield advantage.

2.2.1.2 Agency cost theory

Jensen and Meckling (1976) affirmed that the association between shareholders and a corporation's management fit the definition of a pure agency relationship. Separating capital providers interested in returns generated by the company and management who control the organisation and aim to generate returns to cater to different stakeholders of the company highlights the agency's problem. As management

discharges their responsibilities, conflicts often occur between their roles and the interests of capital providers.

Booth, Aivazian, Demirguc-Kunt, and Maksimovic (2001) expounded on the agency cost theory by stating that conflicts between principals (shareholders) and their agents (managers) can also affect the capital structure choice because shareholders are interested in wealth and value creation, which might conflict with management goals. The decision to use substantial amounts of external finance, such as common equity, can generate agency costs of managerial discretion. In an environment with strong investment opportunities, using external common equity is valuable because it increases the potential for increased shareholder value. Here, management and shareholder interests coincide. However, Booth et al. (2001) contrast this point with an environment without strong investment opportunities where debt limits the agency costs of managerial discretion. Gwatidzo and Ojah (2009) highlighted this coinciding interest between shareholders and managers by mentioning that information asymmetry between investors and managers results in mispricing of the firm's equity, leading to either foregoing positive net-present value projects or undertaking costly equity finance.

In support of the agency cost theory, Abor (2008) highlighted that information asymmetry and moral hazard will be greater for smaller firms because conflicts between shareholders and creditors might arise because they have different claims on the firm. For instance, equity contracts do not require firms to pay fixed, determinable returns to investors but offer a residual claim on a firm's cash flow, and the company has the latitude to postpone dividend payments to shareholders. However, debt contracts offer holders a fixed, determinable claim over a borrowing firm's cash flow, and charge interest rates that cover credit risk, despite the company's profitability. Therefore, the main concern for creditors is the extent to which firms invest in projects covering their claim on the firm, which might pressure management to engage in risky projects.

2.2.1.3 Pecking-order theory

The pecking-order theory explains that when firms face the prospect of financing a project using external capital, the obvious choice would be to use a financing method with the least informational costs. Chipeta and McClelland (2018) proposed that if retained earnings funds are exhausted, firms will issue debt, followed by hybrid debt securities, including convertible debt, and then equity as a last resort because it is associated with high information costs and extreme due-diligent processes involving multiple parties. Barclay and Smith (2005) stated that companies with few investment opportunities and substantial free cash flow will have low (or even negative) debt ratios because the buffer cash will be used to pay down debt and reduce leverage. However, it also indicates that high growth firms with lower operating cash flows will have high debt ratios because of their reluctance to raise new equity.

Although the pecking-order theory has been a conventional process in capital acquisitions, Bhana (1998) highlighted that exorbitant borrowing costs in the mid-80s, with the prime lending at 25% in South Africa, allowed listed companies to turn to rights offers for capital acquisitions. De Wet and Gossel (2016) affirmed that in a South African context, capital structure decisions are consistent with those of other emerging markets in supporting the pecking-order theory.

2.3 Seasoned Equity Offering

Dai (2012) explained the stages of a firm in sourcing equity. In the initial stages of the company, equity is mostly sourced from a few investors. During this stage, should the investors want to sell their stakes, they find the market illiquid. The growth needs of a company at a later stage require additional equity capital; hence, the desire to go public by selling shares to numerous investors. This process is known as IPO. After the IPO, the company's subsequent issuances of shares are referred to as SEOs, also called follow-on or secondary offerings in the industry (Dai, 2012). SEOs are typically undertaken by a public offering, a rights issue, or a private placement.

Burkart and Zhong (2018) posited that public companies undertake SEOs to raise new equity capital from current shareholders and new investors. SEOs can be classified as public and rights offerings. In public offerings, firms announce the issue size, and

current shareholders and new investors can subscribe. Furthermore, the firm might offer current shareholders some guaranteed allocation of newly issued shares up to their fractional ownership, referred to as dilution protection. The public offering price must be sufficiently attractive for new investors to participate. In rights offerings, firms announce the issue size and offer short-term in-the-money call options, i.e., pro-rata rights to current shareholders. Current shareholders receive the rights for free and decide whether to exercise them and receive new shares.

Hao (2014) explained various hypotheses explaining the rights offer issuance decision. The first one explains overvaluation (or market timing explanation), where the issuance might indicate that firms issue equity when their stock is overpriced. Second is the agency explanation, raising the conflict that managers sometimes raise equity capital to benefit themselves at the expense of shareholders because the equity capital obtained through SEOs does not have the contractual discipline associated with debt financing. The last hypothesis is that the short shareholder horizons increase the likelihood of an equity issuance because short-term investors have less incentive to monitor managers effectively. A shorter shareholder horizon implies less shareholder monitoring. Therefore, issuers with a shorter shareholder horizon should have a more serious agency problem in their equity issuance decisions.

Tan et al. (2002) and Hao (2014) proclaimed that investors react negatively to announcements of SEOs because of overvaluation and the agency's hypothesis. Hao (2014) stated that the agency explanation argues that SEOs exacerbate the misalignment of shareholder and manager interests; therefore, the negative stock price reaction to SEO announcements might reflect higher expected agency costs.

Spiess and Affleck-Graves (1995) provided statistics, indicating that the median return in the five years following an SEO is 10%, compared with a median five-year holding period return of 42.3% for similar-sized non-issuing firms in similar industries. Therefore, the comparison indicates that the underperformance of SEOs persists across most years.

To further substantiate the negative effect of SEOs, empirical evidence by Loughran and Ritter (1997) reveals that the median profit margin for issuing firms decreases from 5.4% in the fiscal year of the offering to 2.5% four years later. The median return

on assets decreases from 6.3% to 3.2%. The median operating income to asset ratio falls from 15.8% to 12.1%. These declines are much larger, economically and statistically, than the corresponding declines for non-issuing firms matched by asset size, industry, and operating performance. Loughran and Ritter (1997) added that while these patterns are present for both large and small issuers, post-issue deterioration is more severe for smaller issuers.

D'Mello, Tawatnuntachai, and Yaman (2003) illustrated a different view of the adverse reaction on announcing SEOs. Their study indicated that firms regularly issuing equity with time are subject to less public scrutiny and uncertainty. A firm that has made several SEOs will be larger and more mature; hence, less risky than when it initially issued equity. An additional point is that a firm that has sold equity often might be subject to less information asymmetry because it is large and more likely to be followed by analysts and the popular press or because investors and financial intermediaries have examined its performance each time it raised funds. Therefore, a negative price reaction would not be expected once the firm gained familiarity in the market.

Another alternative to seasoned equity offerings other than a public offering or a rights offer is a private placement which will be discussed for the remainder of this subsection. One of the influencing factors that influence private placements is that a market for privately issued equity exists because these issues offer well-diversified institutional investors the prospect of expected risk-adjusted returns higher than those obtainable from publicly traded securities, thereby improving the efficient opportunity set of their investment portfolios. Another influencing factor is the suggestion that private equity investments share market inefficiencies with asset groups such as venture capital investments, distressed debt, and real estate that allow investors to obtain higher expected risk-adjusted returns as a result of skilful fundamental analysis of an investment's prospects coupled with the skilful application of active management (Chu, Lentz, and Robak, 2005). Dai (2012) expanded the study on private placements by providing a view on an ability to target a specific market for private placements. The issuing firm sells the entire issue to a single investor or consortium of investors, such as banks, insurance companies, and pension funds.

Hertzel and Smith (1993) revealed positive announcements period abnormal returns for private equity placement, which is in contrast with the negative market reaction to public equity issue announcements, as indicated by other empirical studies. Positive abnormal returns are explained by the willingness of private placement investors to commit funds to a firm with management's decision to forego a public issue. They believe that this conveys to the market that the firm is undervalued because a private placement is most likely to be associated with increased monitoring and reduced agency problems (Hertzel & Smith, 1993).

Conceptually (Chu et al., 2005) stated that the effect of informational asymmetry about the prospects of publicly traded firms should be the same for both a private issue of equity and a seasoned public offering. Therefore, the information asymmetry between firm managers and investors should be driven by pre-existing financial circumstances of the issuing firm. Because firms have a choice to engage in private placement, Lee and Kocher (2001) indicated another benefit in dealing with the agency cost problem. Undervalued firms with favourable prospects and little financial slack use the private placement method to resolve the information asymmetry problem associated with raising external equity capital at lower information costs.

2.4 Rights Offer

2.4.1 Rights offer description and process

Mehar (2005) acknowledged that a rights offer management can use as a source of capital financing among other alternative forms of equity finance, such as reserves and surplus and IPO. Van der Linde (2008) indicated that in the South African context, the mechanism used to restrict share transfers is referred to as pre-emptive rights. The purpose of restricting share transfers in private companies is to keep the company in the hands of a closed circle of approved members. In the context of a rights offer, Van der Linde (2008) stated that the term pre-emptive right is also used to refer to a right of existing shareholders to take up new shares being issued by their company. By subscribing for further shares, existing shareholders with the financial means to inject additional funds into the company can avoid a dilution of their shareholdings and prevent outsiders from becoming members.

Holderness and Pontiff (2016) highlighted that the effects of shareholder nonparticipation present an opportunity for dilution risk, as wealth transfers from them to participating shareholders and standby buyers or underwriters. Although pre-emptive rights protect existing shareholders, their nonparticipation in a rights offer nullifies the protection benefit from dilution, despite that firms are not legally bound to disclose the full participation and nonparticipation effects of a rights offer process. However, issuing companies might place institutional safeguards to protect nonparticipating shareholders against institutional investors attempting to capture unexercised rights. However, when no such safeguards exist, managers might worry that a rights offering could attract institutional shareholders and antagonise small shareholders.

Massa et al. (2013) conducted a comparative study of renounceable and non-renounceable rights offers and stated that in many countries, including the US, the UK, and Australia, issuers are allowed to restrict the tradability of the rights; however, shareholders have a strong preference for tradability. A renounceable offer takes 21 days, which might expose the issuing firm to public scrutiny and adverse rumours about the firm, which could perpetuate lower subscription demand. An element of coercion exists by the issuing firm for the existing shareholders to either subscribe or face dilution, especially if the nil-paid-letter (NPL) is non-renounceable.

Carlos, Flynn, Uliana, and Wormald (2013) analysed the process for issuing rights offers and factors that influence their success or failure. The conditions attached to issuing rights offers allow shareholders who hold shares at a specific date to have a pre-emptive right to buy shares at a proportion to their current holding. The deadline to qualify for such a subscription begins two days before the rights record date, and thereafter, the offer trades ex-rights. If the shareholder does not exercise his rights or sell his rights to someone who will exercise the rights, his wealth is reduced by the market value of the rights. Therefore, the value attached to rights offers depends on the theoretical value of the shares after the issue, the subscription price, and the number of shares required to buy one new share. In their conclusion, Carlos et al. (2013) affirmed that the firm can make the probability of failure of the rights offering arbitrarily small by setting the subscription price low enough.

Empirical evidence gathered by Holderness and Pontiff (2016) revealed that only 64% of shareholders on average participate in valuable rights offerings, and nonparticipation leads to a risk of dilution. A low take-up by shareholders might be perceived as a red flag indicator associated with less successful fund-raising relative to publicly stated goals and a more negative stock price reaction.

In issuing rights offers, issuers must consider cost implications related to one of three floatation cost methods that might be selected. The first method could be uninsured rights (pro-rate short-lived warrants issued to current shareholders). The second method could be rights with standby underwriting (the underwriter commits to purchase all unsubscribed shares). Lastly is the firm commitment underwritten offer (the entire issue is sold directly to the underwriter) (Eckbo & Masulis, 1992).

A comparison of the floatation cost method discloses that the average direct flotation costs of uninsured rights are significantly lower than the costs of rights with standby underwriting, which, in turn, are significantly cheaper than firm commitment offers (Eckbo & Masulis, 1992). US firms overwhelmingly prefer the firm commitment method when issuing seasoned common stock, with rights issues becoming relatively rare after 1975. Eckbo and Masulis (1992) highlighted that the preference for underwritten offers reflects unidentified managerial benefits of underwritten offers (an agency cost hypothesis) or indirect costs, causing value-maximising managers to avoid rights. However, no definitive evidence exists that concretely highlights the preference for underwritten rights offers.

Eckbo (2008) added on the floatation cost implications between a pure rights offer and an underwritten issue by indicating that a pure rights offer has the lowest floatation cost, provided the shareholders take up the offer. The complexity occurs when the offer is sold to investors because of low shareholder take-up. Therefore, to attend to the investor concern that the issue might be overpriced, a reputable underwriter certifies the quality of the offering; hence, underwritten offers have become popular.

Marsden (2000) queried that although a firm commitment underwritten rights offer provides a quicker turnaround time in raising proceeds from a rights offer, and underwriters offer ongoing professional advice, no explanation shows the reason for the dominant use by firms of the underwritten offer, especially in the US market.

However, firms might opt for non-underwritten rights offer should there be a high likelihood of take-up and participation by existing shareholders.

The valuation of a rights offer is also a critical analysis for shareholders. Koenig-Matsoukis (2010) presented evidence of valuation errors on the rights market that shareholders sell their rights at a price lower than its fair value, especially in concentrated ownership or the presence of sophisticated buyers, such as underwriters. Koenig-Matsoukis (2010) also indicated that shareholders incur additional unrecorded transaction costs when selling in the open market. All costs and value complexities result in the shareholder's wealth loss.

Substantial variations exist across countries in using rights offers as a form of capital acquisition. For example, Holderness and Pontiff (2016) highlight that rights offerings are rarely used in the United States, Israel, and Canada, whereas in Italy, 85% of all seasoned equity issuances by value and 63% by numbers are via rights offerings. Seasoned public equity offerings account for only 5% and 16%, respectively. In Sweden, rights offerings account for 85% of seasoned issuances by value and 53% by numbers, whereas public offerings constitute less than 1% by both measures. In many other countries, including diverse markets, such as Singapore and the UK, seasoned equity is far more likely to be raised via a rights offering than a public offering. Holderness and Pontiff (2016) further indicated that the conventional wisdom is that virtually all shareholders exercise their rights and purchase stock in a rights offering.

2.4.2 Benefits of issuing a rights offer

Certain companies might prefer a rights offer as capital acquisition because it does not attract obligatory regular repayment instalments, and no collateral might be required. Among other motives for the rights offer preference as alternative finance (Bhana, 1988), indicated that corporates move away from debt as a source of capital injection into equity capital because of an exorbitant borrowing prime overdraft rate of 25% in South Africa in early 1985. This allowed listed companies to use unconventional measures to reduce their debt by substituting it with cheaper equity capital. Furthermore, Bhana (1988) indicated that losses due to foreign exchange

incurred by several large manufacturing companies in 1984 and 1985 caused these companies to approach the JSE for additional capital to increase their capital base.

According to Otieno (2014), to increase the chances of success for a rights offer take-up and motivate existing shareholders, management would offer a rights issue at a discount as low as 20%–30%. In this way, management ensured full subscription for the shares to raise the required capital. This also serves as protection and a cushion to avoid the possibility of the market share price falling below the subscription price of a rights offer.

Otieno (2014) reiterates that quoted companies prefer a rights issue because it is a cheaper way of raising capital compared to bonds or even initial offers. Usually, the costs of preparing a brochure, press advertising, and underwriting commission involved in a new issue of shares or interest costs on bonds are fundamentally forfeited. Nevertheless, some costs, such as accountants and lawyers' fees, are incurred, although the percentage of their costs fall as the sum raised in the rights issue increases, making the overall cost much lower than in the initial issue. In an analysis of transaction costs involved in a rights issue, the company should contact all shareholders and set up a mechanism for selling rights (Kithinji, Oluoch & Mugo, 2014).

Eckbo (2008) stated that issuers know how the funds will be used (financing new investments, paying dividends, repurchasing debt, resolving a liquidity crisis). They also know the company's prospects about the true value of the company's assets in place and its future investment opportunities. This supports the reasons for issuing of equity finance by issuers of rights offers.

2.4.3 Equity and liquidity

Balachandran, Faff, Theobald, and Van Zijl (2012) indicated that the liquidity of a rights offer is related to several variables and phenomena, including rights signals, take-up, and underwriting status. The variables include high shareholder take-up versus a lower take-up, investor confidence, high versus low-quality firms, subscription price discount, and underwritten versus non-underwritten rights offers. These variables contribute to liquidity and turnaround time in financing capital using rights offers.

Malhotra and Gopalaswamy (2012) stated that an equity issue increases liquidity. It leads to participation in the market through increased shareholders and outstanding shares to be traded by a wider market with more traders interested in trading the security, translating into greater overall liquidity. A notable change in liquidity means a change in execution costs from an investor's viewpoint, which can affect the cost of capital of the announcing firm.

Massa et al. (2013) indicated a link between the firm's quality, execution risk, and liquidity in issuing a rights offer by stating that certain firms might be concerned about execution risks. These companies include firms in financial distress, small risky firms with thinly traded stocks that are more sensitive to negative information, and firms that possess negative information about the future. In line with this execution risk hypothesis, firms with poor recent performance, illiquid stock, and a low-interest coverage ratio are more likely to make their issue rights non-tradable. Although a generous discount promotes a rights offer take-up, it can also signal management beliefs that the stock is overvalued, increasing execution risk and reduces the liquidity of a rights offer.

Velayutham (2019) proposed that a catalyst for liquidity for SEOs is through investment banks providing marketing services for firms making SEOs, which is higher for firms paying higher underwriting costs. Since SEOs are associated with an explicit marketing mandate, after issuing SEOs, firms should experience an increased investor awareness.

Another view on reduced stock liquidity reveals that rights offerings are associated with a statistically significant increase in proportionate bid-ask spreads, whereas public underwritten offerings are followed by a significant decrease in proportionate bid-ask spreads. The difference in the behaviour of spreads is attributed to the different effects of the two methods on the issuing firm's ownership structures. Firms with a wide shareholder spread and complex ownership structures prefer public underwritten offerings, compared to firms with concentrated ownership with the latitude to significantly reduce direct floatation costs and the information asymmetry prevalent in equity financing by obtaining guarantees from their large block holders and management (Kothare, 1997).

Dai (2012) indicated that the underlying notion for a quality equity offer in top-tier banks enhances the quality of the certification of the issues, reduce information asymmetry and, therefore, lower SEO floatation costs. This notion further extends to comanagers where the results also indicate that underwriting spreads are significantly lower when highly prestigious underwriters or commercial banks are included as comanagers in a syndicate. From previous studies, multiple variables, from the firm's quality to the quality of the offer, attribute to the extent of the liquidity of the offer. Therefore, the stock market liquidity is a critical determinant of the costs of raising external capital.

2.4.4 Rights offer and institutional trading environment

Dang and Yang (2013) indicated strict requirements and conditions for firms issuing a rights offering in a Chinese stock market. They posited that for a firm to issue a rights offering, a minimum of 10% return on equity (ROE) is required to be met in each of the recent three years prior to 17 March 1999 or on average post 17 March 1999. The strict conditions for rights offering triggered a substantial increase in underwritten offers, especially after 2000. This prompted the China Securities Regulatory Commission to raise the ROE requirement for underwritten offers and lower the requirement for pure rights offers. The regulatory body monitors the nominal requirements and actively adapt the regulations based on circumstances.

Gwatidzo and Ojah (2009) highlighted that the environment in which firms in Africa operate is different from that in developed countries because of differences in institutional infrastructures. For example, capital markets in the developing economies of Africa are inefficient, small, and thinly traded. Further, governments in these countries have high propensities to intervene in markets. However, capital markets in developed economies are characterised by well-functioning stock markets and efficient and large credit markets. Such efficient capital markets facilitate transferring funds from surplus to deficit units, foster the transmission mechanism of monetary policy, and engender appropriate environments for robust economic activity. Carlos et al. (2013) concurred, highlighting the liquidity problems that certain listed corporations face, and such encounters inadvertently lead to such companies delisting from the JSE.

Tsangarakis (1996) conducted a rights issue study in a thinly traded market on the Athens Stock Exchange, where most listed companies are state or family owned. The study revealed statistically significant positive abnormal returns before the announcement day, which could reflect insider trading activities or leakage of directors' decisions to announce a rights offer. The two-day cumulative abnormal returns (CAR), which incorporate both day zero (day of announcement) and a day before, indicated significantly positive abnormal returns, concluding that the null hypothesis of zero abnormal returns because of a rights offer announcement was rejected by this study. The study then concluded a positive effect occurs on a share price on announcements of equity issues because Greece lags in secondary market participation, and stock ownership is concentrated in the hands of a few shareholders making the agency and adverse information effect less risky (Tsangarakis, 1996).

Bøhren et al. (1997) studied the Norwegian market and noted that investor characteristics, such as personal wealth constraint, diversification benefits, and value of control rights are challenging to quantify. The study indicated that if the probability of under subscription is high, the issuer selects to underwrite a rights offer to guarantee success in securing capital. Bøhren et al. (1997) also found that two-day announcement effects of a rights offer are significantly positive and greater for uninsured rights compared to standby offers. The rights effects are more negative the greater the issue size is. The offer also becomes more negative the greater the pre-announcement runup in the issuers' stock price is. Lastly, the rights effects are more positive the greater the proportion of the voting stock held by board members and the CEO before the issue is.

Marsden (2000) examined the New Zealand market and stated that it is a small capital market with a different institutional environment and economic, political, and regulatory structures. Marsden (2000) further stated that the price reaction on the announcement date for this low capital market for underwritten shares was negative, which could be indicative of what was mentioned in prior studies that underwritten offers are associated with higher adverse selection costs.

Contrary to popular findings regarding price reaction on an equity issue on the announcement, Goyal et al. (1994) found that the post-announcement reaction on the

ex-rights day for stocks listed on the Tokyo Stock Exchange is associated with a significant positive abnormal return of 7.10%. Furthermore, return in the five days before the ex-date is insignificantly different from zero, whereas the positive return persists in the five days following the ex-date. If investor sentiment perceives a rights offer as good news, as in the Tokyo Stock Exchange, the results emulate increased investor confidence in issuing firms.

However, certain institutional markets indicate that although there is an expectation of a market reaction from the potential news disseminated via a rights offer, the market in India showed insignificant results post a rights issue announcement. Therefore, the post-announcement effect of the Indian stock market on a rights issue is valued neutral (Agarwal, 2012).

2.4.5 Legislative requirements of a rights offer in South Africa

The Companies Act 71 of 2008 adds to the definition of a rights offer by describing a rights offer as with or without a right to renounce in favour of the other person made to any holders of a company's securities for subscribing any securities of that company, or any other company within the same group of companies. Section 95 of the Companies Act specifies that the minister can make regulations to a) establish general or specific requirements, respecting the form and content of rights offers, letters of allocation (LOAs), and prospectuses; b) prescribe the manner and form to be followed in filing and publishing rights offers, LOAs, and prospectuses; and c) regarding related or ancillary matters concerning the offering of company securities.

Bhana (1988) also indicated the administrative requirements in trading rights offers by stating that the rights of companies listed on the JSE represent a negotiable instrument and are freely traded on the stock exchange using NPLs, with the subscription period averaging about 18 days to trade NPLs.

The JSE corporate action definitions guideline stipulates the operational processes in dealing with a rights issue by proclaiming that JSE offers can be traded for three weeks before payment is due. It can also be taken up or allowed to lapse, depending on the terms of the NPL and the decision of existing shareholders. If the shareholder does not wish to subscribe to the new securities, the rights under the title of allocation letters

can be sold in the market until the last day mentioned in the rights letter. The guideline further defines that NPLs are instruments with a lifespan of 18 business days and are listed and traded like ordinary shares. They are identifiable by the share code being suffixed with an N. The associated take-up price is normally below the current market price of the shares into which the NPLs will be converted to make the issue attractive. Shareholders take up their rights when they decide to convert their NPLs and lapse their rights when they decide not to.

The JSE listing requirements detail the specifications that must be disclosed for a rights offer in accordance to S.7.C.16 as follows: (a) the purpose of the rights offer; (b) the amount to be raised using a rights offer and the number of securities that are proposed to be issued; (c) the terms of the offer; (d) if underwritten, details of the underwriter and the underwriting commission must clearly be stated; (e) details regarding the proposed listing of the LOAs, the subsequent listing of the new securities, and the amount payable for listing fees; (f) details regarding the LOAs, such as acceptance, renunciation, and payment that must be made in South African currency; and (g) a statement regarding exchange controls as agreed by the South African Reserve Bank.

Alston (1996) defined various milestones in administering a rights offer by elaborating that LOAs, also commonly named NPLs, are issued to all shareholders registered on the last date to trade (LDR) and entitle them to receive the rights to additional shares in proportion to their current holding. Between the date of the rights issue announcement and the LDR, the shares and LOAs are indivisible and are said to trade cum-rights. All persons registered as holding LOAs on the closing date of the offer (COO) receive shares to which the LOA is entitled. During the listing period, when the shares and rights trade separately (between the LOR and COO), the shares trade ex-rights. The common period for listing rights is four calendar weeks (20 trading days).

From a global perspective, Kabir and Roosenboom (2003) elaborated on the legislative requirements by indicating the rules governing the underwriting of rights issues. The requirements depend on the preference of each country or exchange. The US prefers underwritten rights issues, European markets commonly use rights issues, and Amsterdam exchanges do not allow listed firms to issue equity without using a

financial intermediary. In South Africa, the JSE listing requirements provide the issuer an option to underwrite rights issues on the stock exchange.

Koenig-Matsoukis (2010) highlighted the turnaround time in trading a rights offer by stating that there are lower trading days for developed international markets. In France, on average, rights offers trade for 13 days and in NYSE, 13 to 14 days on average. Finland's rights trade around 18 days, which is closer to the South African market of 18 to 20 trading days on the JSE. This shows that rights offers have gained significance over the years as an alternative source of finance, and the JSE market has adopted this method of finance, guided by legislative requirements and liquidity of the JSE.

2.4.6 Capital raised through issuing a rights offer

Numerous empirical studies attest to the magnitude of capital raised through an equity issue. From a global perspective, Massimo, Vermaelen, and Xu (2013) indicated that, among other forms of capital acquisitions, rights offers are also an alternative form of capital acquisition. Massimo, Vermaelen, and Xu (2013) indicated that firms globally in 2007 raised $175 billion through rights offerings, compared with $346 billion through cash offerings and $295 billion by going public. The study highlights that a rights offering does not offer automatic insulation from dilution, as not all shareholders can afford to subscribe to the offer. Although existing shareholders can sell their NPLs, the market is illiquid, and the letters are underpriced.

The significance of South African markets for rights issues is demonstrated by capital raised using this alternative method. Bhana (1988) reported that in 1985, listed companies in South Africa raised more than R2bn using rights issues. Alston (1996) reported that in 1993, R7.263bn was raised using rights offers, R7.901bn in 1992, and R6.530bn in 1991 (Alston, 1996). Setati (2013) demonstrated that R84.9bn was raised through 108 rights offers from the JSE from 31 January 2005 to 29 January 2013.

The above figures from empirical evidence demonstrate consistent exponential growth in rights offer equity financing. This form of financing has contributed significantly as an alternative capital acquisition method in the South African corporate environment.

2.5 Market Reaction Following a Rights Offer

2.5.1 Signalling effects of a rights offer

Management conveys information about investment and financing when announcing a rights offer (Syokau, 2014). The financing signal is that internal funds will be insufficient to finance the firm's activities, whereas the investment signal is that the firm wants to invest aggressively (Lukose & Rao, 2003). Bello (2016) paints three scenarios that could result from an issue of a rights offer. One is a negative reaction in line with information asymmetry suspicions. Two is no reaction from the market, which agrees to market efficiency notions, and three is a positive reaction with the expectation that the acquired proceeds will be used to invest in projects yielding positive net-present values. Bello (2016) also investigated insider trading and elaborated that directors outperform the market in their share dealings. The outperformance is more on the share selling rather than buying for an analysis done for JSE shares, whereas in the Brazilian stock and the Nigerian market, an adverse reaction in the stock price is noted before equity issue announcements. This reaction might be indicative of insider trading before announcing an equity issue.

Kabir and Roosenboom (2003) highlighted that a rights issue might indicate an overvalued share due to the information asymmetry hypothesis; therefore, should information asymmetry be a major issue, evidence has shown that there would be a significant decline in the share price. However, high-quality firms use higher subscription prices or smaller discounts, leading to a less negative price decline.

Gwatidzo and Ojah (2009) confirmed the point of information asymmetry by stating that in a contemporary corporation, separating ownership and control is conventional. Most firms are run by managers who operate as agents of shareholders, a relationship fraught with agency problems because shareholders and managers tend to pursue their interests. This also affects the capital selected by management to sustain the growth and development of the corporation in the future.

2.5.2 Operating performance post a rights offers

Setati (2013) indicated that issuing equity is an integral part of tools at the disposal of management in defining the capital structure. To determine how projects are funded, the capital structure provides a valuable mechanism. It answers the question of how projects are to be funded and affects the risk profile of the company, which has consequences on the expectations of the funders. The relationship between equity issuance and long-term performance provides a link between the core concepts of capital structuring and budgeting. Thus, numerous studies have been conducted in this regard from different perspectives, exploring the relationship between an equity issue and subsequent long-term company performance (Bayless & Jay, 2008; Loughran & Ritter,1997; Pascoe, Ward, & Mackenzie, 2005).

Bray and Peterson (2009) indicated a long-term stock underperformance and post-issue declines in operating performance. The evidence of the adverse performance was stronger when liability repayment was the intended purpose of the equity issue, compared to issuers that specify an investment purpose in which the funds will be spent.

Lukose and Rao (2003) highlighted statistically significant empirical results, indicating a drop in operating performance after a rights equity issue for seasoned equity offerings in the US market. The decline in operating performance is more prominent for big firms, low market-to-book value firms, and firms with lower directors' holdings. The drop in performance is associated with poor operating management styles in using assets in generating returns.

Agarwal (2012) indicated the effects on the capital structure that might result from a rights offer by highlighting that the debt-equity ratio of the firm reduces because of a rights offer. The market might react negatively as the ratio of the present value of the tax shield to the firm value falls post a rights offer.

Contrary to the negative long-term effect in operating performance post a rights offer, Da Cunha and Seetharam (2018) revealed that a behavioural and rational reaction driven by investor sentiment and concerns regarding information asymmetry or adverse selection and risks do not indicate a significant impact on the long and short-

term performance of firms embarking on an SEO for JSE-listed shares. Therefore, the empirical evidence gathered by Da Cunha and Seetharam (2018) proved that, overall, there does not appear to be a new issues puzzle (known as operational performance effect post an equity issue) in the South African context. Evidence indicates that the rational risk-return framework is what best describes SEOs' long-term performance.

2.5.3 Rights offer announcement behavioural effects and market perception

Garisch (2013) stated that a capital market is efficient if it fully and correctly reflects all relevant information in determining security prices. Three hypotheses to test short-term reversion on JSE stock were highlighted. (1) The weak form of the efficient market hypothesis (EMH) indicates that historical data alone cannot be used to earn abnormal returns. (2) The semi-strong form of EMH states that publicly available information is also insufficient. (3) The strong form of EMH indicates that even insider information cannot be used to earn abnormal returns. Garisch (2013) added that the EMH explains the efficiency of price adjustment in the market unbiasedly as new information becomes available, indicating that certain sets of information will be insufficient in earning abnormal returns. This notion should apply to the rights offer announcement event.

Asquith and Mullins (1986) highlighted that the signalling effect depends on the funding objective from a rights offer, stating that equity finance sourced to reduce debt might be perceived as a transfer of wealth from shareholders to bondholders. This might signal management's expectations about the firm's future cash flow prospects and have a significant adverse impact on the stock price. An added disadvantage to paying debt using equity finance is the loss of tax incentives.

A body of empirical studies exists that is more detailed on the potential causes of the depressed share price associated with a rights issue. Smith (1977) stated that the fall in the stock price ex-rights day is comparable to the expected decline in the stock price ex-div date and that a decline in the stock price equals the market value of the rights. The impact of the additional shares issued through the rights offering is the same as that of a stock split, and the wealth of the firm's owner is unaffected. With that said,

the study further highlighted that transaction costs and tax liabilities for a shareholder choosing to sell his rights inadvertently affect owners' wealth.

Bhana (1998) provided evidence of a significant price drop of 3.51% over the two-day announcement period of an equity issue. Although the share price reduction is concentrated primarily on the announcement date, the CAR falls by ~1.16% in the five days preceding the announcement, which could be attributed to information leakage and insider trading reaction. Furthermore, the share price reduction persists in the period immediately following the announcement; for example, one month after the announcement, the CAR is −2.54%. These results indicate a significant concern of adverse selection or information asymmetry, insider trading due to the five-day price drop preceding the announcement, and continued caution and pessimistic investor sentiment long after the issue of a rights offer.

Van der Merwe (2016) supported the adverse price performance with empirical evidence revealing negative share price performance over the event window of t − 60 days to t + 60 days, a negative CAR of 2.90%, and applying the CAPM-model, a negative CAR of 4.90%. The results are in line with other studies on event analyses of rights issues announcements.

Seetharam and Da Cunha (2018) documented an opposing view to popular belief of market timing for rights offers, indicating no significant relationship exists between a firm's market-to-book ratio or prior abnormal share return and the probability that a firm conducts an SEO. In this study, empirical evidence revealed a negative, albeit non-significant relationship, between these variables. Therefore, no signs exist that firms conducting SEOs are attempting to take advantage of high market valuations or previously high abnormal returns.

Seetharam and Da Cunha (2018) further emphasised that no significant correlation exists between investor sentiment and the timing of issuing SEOs. No clear-cut pattern emerged to reliably signal that the peaks and troughs in issuing activity are undeniably influenced by investor sentiment. For example, the second-highest period of SEO announcements occurred in 2009, a period corresponding to low investor sentiment. Therefore, the results provide no evidence consistent with behavioural explanations, particularly those involving market timing considerations attempting to describe the

long-term performances of issuing firms. Instead, the results are consistent with the expectation that differences in returns between issuing and non-issuing firms are sufficiently explained by the variation in market risk.

Asquith and Mullins (1986) indicated a decline in firms' value post a rights offer announcement, which cannot only be attributed to transaction costs incurred in bringing the process of the issue to fruition. Therefore, the results are consistent with the hypothesis that equity sales by corporations and informed investors are interpreted by the market as unfavourable signals about a firm's current performance and prospects, and with the hypothesis that a downward-sloping demand exists for a firm's shares. Market perception and investor confidence are critical in measuring a potential impact because of equity financing. It has management exhausting their wits and skills in seeking capital budgeting resources that the remaining option is to draw attention, negative or positive. However, it is noted as negative, as per studies thus far on the share price performance of the company and might also have a potential dilution effect should shareholders not afford to accept the offer.

Gajewski and Ginglinger (2002) indicated that in France, as in most European countries, a rights issue is the primary floatation method. They have proved that on a floatation cost basis, public offers are more expensive to issue than a rights offer. In terms of share price reaction, the study further proved a significantly negative share price reaction following the rights offer compared to a lower negative share price reaction for a public offer. Therefore, the larger floatation costs associated with the public offer are offset by the less negative wealth effect experienced at the announcement date.

Numerous studies have indicated a general negative price reaction to announcing a rights issue on the JSE because of dilution in earnings per share, regulations, and effects of floatation costs (Alston, 1996; Asquith & Mullins, 1986; Bhana, 1998). However, the evidence gathered from other prominent stock exchanges, such as European markets, indicates negligible results for rights offer effects on share price because of the EMH; therefore, no arbitrage profit opportunity could be earned because of a rights offer (Alston, 1996).

Alston and Uliana 1999) attested to what other studies have indicated that a significant price drop occurs in the share price associated with announcing a rights offering. According to the study, the negative price reaction is brief and occurs on and immediately around the announcement date. Thus, there should be a negligible impact of the announcement on share prices during the listing period of NPLs.

Contradicting results of a neutral price reaction effect revealed that existing stakeholders do not gain many benefits for this capital outlay. Although rights are traditionally sold at a discount, a rights issue does not increase shareholders' wealth. To cushion themselves against dilution and a decrease in the value of their investments, shareholders either must exercise their rights or sell them (Bhana,1988). The study concludes that, from a shareholder's wealth viewpoint, a rights offer and a share split are similar because of the neutral effect on the market. In the long-term, shareholders are unlikely to derive any economic benefits from either rights offers or share splits. Dipchand (1977) confirmed a similar point in comparing a discount price of a rights issue to a stock split, indicating that when shares are sold below the market price, an inherent stock split (or quasi-split) occurs and, theoretically, a share price after the issue should decline to reflect such quasi-split. Therefore, a shareholder neither gains nor loses if he exercises or sells the rights.

2.6 Factors Influencing Rights Offers

Massa et al. (2013) touched on the sensitive issue of controlling block owners with a large holding, who might prioritise their self-interests and be incentivised by non-transparent matters unbeknownst to minority shareholders. Such majority shareholders might be more predisposed to renounceable rights offers for an option to sell or take up more shares, depending on the perceived prospects of the business in the future.

Asquith and Mullins (1986) mentioned the sensitive issue of controlling block owners that might be incentivised by self-interest in undertaking a rights offer. Bhana (1988) concurred that this form of capital acquisition became popular because institutional investors use rights to increase their strategic holdings in target companies. This action by institutional investors is also encouraged by cheaper transaction costs

compared to brokerage fees and other transaction costs incurred when trading in the open market.

Pascoe et al. (2005) revealed that the impact of the rights issue announcement on share price movements can be influenced by economic factors, including interest rate movements, equity markets, economic growth, business cycles, and business confidence indices. Studies on interest rate movements have shown that when interest rate levels are high, the share price response to an announcement of a rights issue is less negative. This could reflect that corporations are more inclined towards equity finance than debt finance in a high-interest period. The impact of the market index test shows that the greater the increase in the stock market index before a rights issue announcement is, the greater the decline in the share price on the announcement. This could indicate that investors view the share as overvalued and suspect information asymmetry on the stock.

Studies on the coefficient of economic growth show that in a favourable economic environment, the share price response to a rights issue announcement will be less negative. This finding also supports the theory that low asymmetric information results in lower negative share price responses to equity announcements. However, in analysing the business-cycle effect which is a broad measure covering many months with varying economic growth as well as the business confidence influence, the study finds that these factors do not convey any added information to the market that would be considered separately when there is a rights issue announcement. The study concluded that the statistically significant economic coefficients influencing share price movements post announcing a rights issue were interest rate levels, economic growth, and stock market performance (Pascoe et al., 2005).

2.7 Hypothesis

In line with the research objective of this study and the literature review, a hypothesis for this study must be formulated. MacKinlay (1997) reported that the assumption for statistical models proclaims that asset returns are jointly multivariate normal and independently and identically distributed through time is imposed. Therefore, the null hypothesis that the event has no impact on return distributions should be maintained.

However, contrary to the null hypothesis and beliefs of the EMH, evidence from empirical studies revealed that, generally, event studies have shown that, as would be expected in a rational marketplace, prices do respond to new information.

This study hypothesised that no causality exists from a company's rights issue announcement event and share price performance. The alternative indicates that the share price for a company issuing a rights offer should react to the announcement event by indicating abnormal returns.

The hypothesis is denoted as follows:

H_1 relates to the share price reaction immediately during the announcement period of a rights offer (5 days before, on day 0, and 5 days post the announcement event)

$H_{1,0}$: CAR = 0: There is no significant abnormal share returns reaction immediately following a rights offer announcement

$H_{1,A}$: CAR ≠ 0: There is a significant abnormal share returns reaction following a rights offer announcement

H_2 relates to the medium-term impact on the share price reaction on days 30, 60, 90, 180, and 252 assessment period post a rights offer announcement

$H_{2,0}$: CAR = 0: There is no medium-term significant abnormal share returns reaction following a rights offer announcement

$H_{2,A}$: CAR ≠ 0: There is significant medium-term abnormal share returns reaction following a rights offer announcements

2.8 Chapter Summary

The literature review chapter discussed details of studies, starting from the framework of the firm's capital structures and its theories and different forms of seasoned equity offerings to discover and clarify the mechanics of equity finance using rights offers. The next chapter consists of research methodology and design.

CHAPTER 3: Research Methodology and Design

3.1 Introduction

This chapter provides a guideline on how the research process is implemented to achieve the research objectives and answer research questions. Section 3.2 covers the research design and the event study methodology. Section 3.3 presents the data used and data sources. Section 3.4 discusses ethical considerations. The chapter ends with a chapter summary as Section 3.5.

3.2 Research Design

Quantitative analysis was ideal for this study to evaluate the short and medium-term share price reaction of issuing firms following the announcement of a rights offer for JSE listed shares. The event study methodology is used to determine the companies' abnormal returns post a rights offer announcements

Woon (2004) described the event study methodology as designed to investigate the effect of an event on a specific dependant variable, and a commonly used dependent variable in event studies is the stock price of the company. An event study will evaluate the changes in stock price beyond expectations (abnormal returns) over a period (event window).

In line with Henderson (1990) and Mushidzhi and Ward (2004), the event is the rights offer announcement. The short-term event window will be five days before the announcement and five days after the announcement, whereas the medium-term event investigates the event 30, 60, 90, 180, and 252 days after the rights offer announcement. Companies with other confounding events, such as announcing an impending merger, signing a major government contract, announcing a new product, or filing a large damage suit within three months of the rights offer, were excluded from the analysis.

3.2.1 Determining the company returns

Woon (2004) indicated that the event study determines whether there is an abnormal stock price effect associated with an event of which, in this study, the event is rights offers for JSE-listed companies. The process of calculating abnormal returns for analysis commences by the determining companies' log price returns, followed by calculating the expected returns using the market model formula as a benchmark for comparison to the stock price changes to ascertain abnormal returns, and lastly, aggregating the abnormal returns measured using the CAR formula for descriptive testing to infer the significance of the event.

The company's returns are determined as a log daily price change as

$$\boldsymbol{R_{it}} = \boldsymbol{Log}\,[\boldsymbol{P_{it}} / \boldsymbol{P_{it-1}}], \qquad (1)$$

where $\boldsymbol{R_{it}}$ is the log return for the company on day *t*, $\boldsymbol{P_{it}}$ is the share price for company *i* on day *t*, and $\boldsymbol{P_{it-1}}$ is the share price for company *i on day t*− 1.

3.2.2 Return's benchmark

Bhana (1998) indicated that the effects on the share price of the equity share issue announcement are measured relative to a standard estimated from the market model. Because the study relates to the rights offer event for JSE-listed shares, the market model benchmark used to compute the expected returns is the JSE All Share Index (ALSI), which is frequently used in event studies for comparability.

The expected return for security *i* is provided by the market model formula as

$$\boldsymbol{E}\,(\boldsymbol{R_{it}}) = \propto_{\boldsymbol{i}} + \boldsymbol{\beta_i}\,\boldsymbol{E}\big(\boldsymbol{R_{m,t}}\big) + \boldsymbol{e_{i,t}}, \qquad (2)$$

where $\boldsymbol{E}\big(\boldsymbol{R_{m,t}}\big)$ is the return on the market portfolio represented by the JSE overall index for day *t*, $\boldsymbol{\beta_i}$ the beta coefficient of the regression, $\propto_{\boldsymbol{i}}$ is the regression intercept, and $\boldsymbol{e_{i,t}}$ is the disturbance term.

3.2.3 The company's abnormal returns

To ascertain whether the rights offer event resulted in changes in the stock price beyond expectation, a difference between the actual and expected returns is calculated to ascertain abnormal returns, AR_{it} (Setati, 2013).

The abnormal return equation is calculated as

$$\boldsymbol{AR_{it}} = \boldsymbol{R_{it}} - \boldsymbol{E}(\boldsymbol{R_{it}}), \quad (3)$$

where $\boldsymbol{AR_{it}}$ is the abnormal return for security *i* for period *t*, $\boldsymbol{R_{it}}$ is the actual return for security *i* for period *t*, and $\boldsymbol{E}(\boldsymbol{R_{it}})$ is the market model expected return for security *i*.

3.2.4 Cumulative abnormal returns

Setati (2013) proposed that once abnormal returns are obtained for each security, as depicted in the above formula, a measurement across time during a selected event window is determined by calculating the accumulated abnormal returns to form CARs.

Cumulative abnormal return is specified as

$$\boldsymbol{CAR_{iy}} = \sum_{\boldsymbol{t=1}}^{\boldsymbol{\gamma}} [\boldsymbol{AR}]_{\boldsymbol{it}}, \quad (4)$$

where $\boldsymbol{CAR_{iy}}$ is the cumulative abnormal return for company *i* from day 1 to day γ, and $[\boldsymbol{AR}]_{\boldsymbol{it}}$ is the simple abnormal return for company *i* on day *t*.

A univariate *t*-test analysis was used to determine the significance of the market price reaction post announcing a rights offer for JSE-listed shares. The CARs were calculated using the market model formula. Significance testing was done on the null hypotheses at a 5% significance level.

3.3 Data and Data Sources

The study uses rights offer data used by companies as a source of SEO finance. To determine how the market reacts to rights offer announcements, share price data are used. The research period covers different economic cycles before, including the 2008/2009 fiscal crises, and the most recent data on rights offers from 01 January

2006 to 31 January 2020 year of assessment. All companies with rights offers over the sample period denominated in Rands, with available share price data before and after the rights offer announcements, are included in the analysis. The rights offer information is obtained from the JSE and the share price data and other relevant financial information from EquityRT.

In total, 162 rights offers were raised from 01 January 2006 to 31 January 2020 from the JSE mainboard. From the selected rights offers, 68 have been delisted from the JSE during the sample period, of which 49 had no data to warrant inclusion in the sample and were, therefore, omitted. Two rights offers were suspended from the JSE shortly after the rights offer announcement and were excluded from the testing sample due to a lack of price movements for such shares. The sampling method excluded confounding events, comprising 39 rights offers around the declaration date. Therefore, the final sample comprised 72 rights offers for descriptive analyses.

3.4 Ethics Considerations

Fleming and Zegwaard (2018) indicated that although research methodology and methods are critical steps in research, it is also key to disclose ethical considerations as part of the process. Ethical considerations are more critical for minimum to high-risk studies where human participants are involved compared to a no-risk level that does not involve human participants. Quantitative studies based on document analysis and quantitative datasets, as in this study, are not excluded from ethical consideration procedural requirements, as those who have been entrusted with research are under a basic obligation to act with academic, methodological, and ethical credibility (NESH, 2006). Therefore in line with the suggestions from NESH (2006), researchers conducting quantitative studies with no human participants should apply the following ethical considerations.

Honesty

Kaiser (2019) stated that researchers have a professional duty to exercise sound ethical judgement. As part of this duty, researchers must be methodologically qualified

to conduct research with validity and quality, and thus, must do their utmost to ensure that objective concerns take precedence over preconceived notions and assessments. Being honest means being fair and credible.

Protection of integrity

In considering the protection of the integrity of a research study Kaiser (2019) proposed that ethical norms providing credibility to the integrity of the study include requirements for honesty, requirements for informed consent, anonymisation and storage of data, the right of access to data for participants, and duty of confidentiality for all those who undertake research.

Control and ethical competence

Control and ethical competence can also apply to implementing quantitative studies, often involving copious amounts of data, requiring methodological competence to conduct analyses in a stringent and academically acceptable manner (Kaiser, 2019). Although the extent for quantitative studies where no human participants are involved require less extensive procedures compared to studies involving a risk level of human participants and discussion of sensitive topics, a researcher must apply ethical consideration in conducting research.

3.5 Chapter Summary

This chapter provided a road map for the quantitative analysis of the short and medium-term impacts of a rights offer announcement for JSE-listed shares in the 01 January 2006 to 31 January 2020 years of assessment. The 13-year analysis provided an extensive review in gaining insight into the performance of the selected sample. This chapter presented data obtained from the JSE to be analysed using EquityRT. The research approach and design offered a comprehensive presentation of variables and formulas to be conducted to attain the results and ethical considerations. The next chapter will present the data analysis conducted using the research methodology and report the outcome of the tests conducted.

CHAPTER 4: EMPIRICAL RESULTS

4.1 Introduction

This study investigated the market reaction to a rights offer announcement using event study methodology to determine whether a rights offer create value for shareholders. Section 4.2 discusses univariate analysis, Section 4.3 presents short-term reactions, and Section 4.4 medium-term performance of JSE stocks post rights offers. The chapter summary concludes the chapter.

4.2 Univariate Analysis

4.2.1 Capital raised using rights offers

Because a rights issue is a source of alternative capital acquisition serving different purposes for a firm's expansion, acquisitions, or to bolster the balance sheet or save the company, Figure 4.1 shows the capital raised using rights offers over the sample period. Figure 4.1 shows a sharp increase in rights offer capital in 2007 from R4,8bn to R21bn in 2008. This change could have been driven by the systemic effects of the 2008/2009 global fiscal crisis, as most companies explored alternative finance channels, as the prime lending rate was at 15% in 2008. Given the exposure to using a rights offer as a form of raising capital during periods of high interest rates, it created a base for using this instrument during times of economic recovery. Figure 4.1 shows how over the years, a growth trend occurred, reaching a high in 2014. This correlates with the market recovery trend since the global fiscal crisis, which has seen significant growth of the JSE ALSI. A further correlation is seen in 2018 and 2019, where there has been a lower volume of rights offers, with the market tapering off from the highs seen in 2014 and 2015.

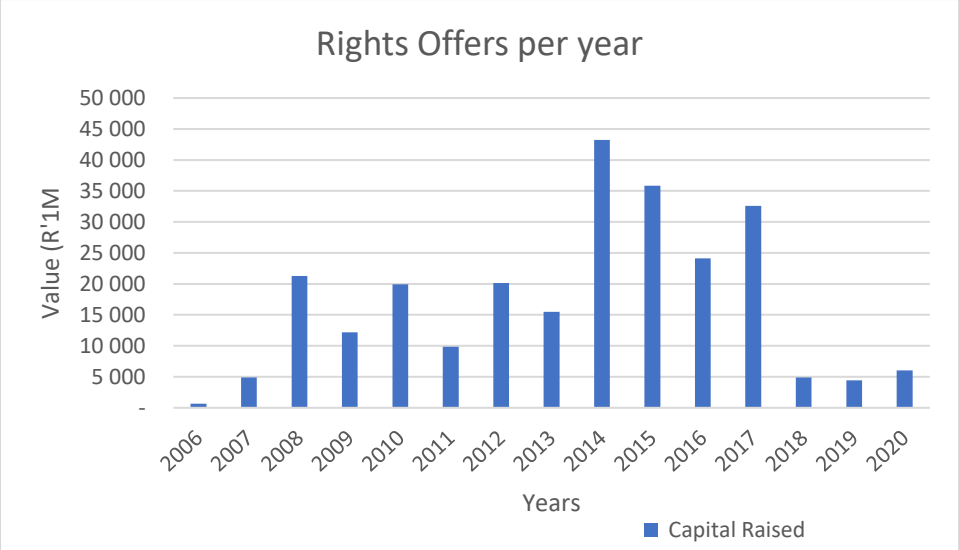


Figure 4.1 Capital raised using rights offers over the sample period

Table 4.1 categorises the capital raised by different industries. It also shows that the basic materials industry takes the lead in rand terms (R79bn) in using rights offers as a finance source, followed by the finance industry, which raised a sizeable R68bn for the review period. The technology industry raised the lowest rand value of rights offers of R285m.

Table 4.1 Rights offers issued by different industries (JSE): 01 Jan 2006–31 Jan 2020

Industry	Count	Value (R)	%
Basic Materials	31	79,049,387,586.34	30.94%
Consumer Goods	13	24,951,807,760.93	9.76%
Consumer Services	17	21,459,797,807.95	8.40%
Financials	60	68,601,484,180.66	26.85%
Health Care	7	31,813,959,397.47	12.45%
Industrials	27	27,138,221,916.58	10.62%
Oil & Gas	3	2,222,915,117.21	0.87%
Technology	4	285,770,000.71	0.11%
TOTAL	162	255,523,343,767.85	100.00%

4.3 Short-Term Reaction to Rights Offer Announcements

Empirical results were obtained using a univariate *t*-test analysis on the null hypotheses at a 5% significance level to determine the significance of the market price reaction post announcing a rights offer for JSE-listed shares. The CARs were calculated using the market model formula (Equation 4 in Chapter 3). Table 4.2 presents CARs of rights offer firms over a short-term −5 and +5 event window.

Table 4.2 Short-term market reaction to rights offer announcement

Event Window	CAARs %	Median	SD	*t*	*p*	Significant
−5	−0.35%	-0.00112	0.05950	−0.56175	28.80%	No
−4	0.20%	−0.00032	0.04287	−0.08306	46.70%	No
−3	−0.29%	−0.00188	0.04352	−0.57947	28.21%	No
−2	0.15%	−0.00545	0.08109	−0.20573	41.88%	No
−1	0.27%	−0.00101	0.08879	−0.02983	48.81%	No
0	0.28%	0.00302	0.09469	0.20625	41.86%	No
1	0.97%	0.00182	0.10641	1.43030	7.85%	No
2	1.34%	−0.00201	0.11654	1.53110	6.51%	No
3	2.30%	−0.00196	0.14471	2.25017	1.38%	Yes
4	2.94%	0.00197	0.15903	2.55473	0.64%	Yes
5	2.56%	0.00820	0.16393	1.77394	4.02%	Yes

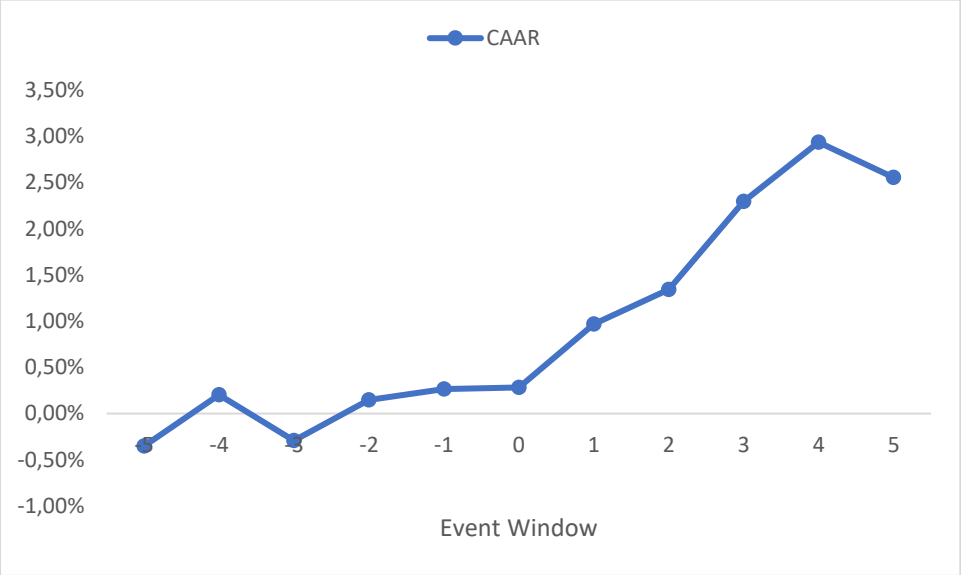
CAARs, Cumulative average abnormal returns; SD, Standard deviation

Table 4.2 shows that during the anticipation event window from day −5 leading up to the event date, an insignificant market reaction occurred, as *p*-values were higher than the 5% threshold significance level. Therefore, no empirical evidence exposes insider trading before the event date. However, leading to the rights offer announcement date, the standard deviation increased relative to the mean by jumping from an average of 4% in prior days to 8% in day −2, and the spread continued to widen to double digits

thereafter. The *p*-values from day 1, although not significant, were moving closer to lower unit percentages. The market reaction was positive and significant on day +3, with the *p*-values of 1.37% and *t*-statistics of 2.25. Days +4 and +5 also have significant *p*-values of 0.63% and 4.01%, respectively. These results show that the market takes about three days after the rights offer announcement date to assimilate the information and react positively to the news.

Figure 4.2 shows the short-term market reaction to rights over announcements. The figure confirms the significant positive market reaction on days +3 to +5.

Figure 4.2 Mean CAR measure for Rights Offers



CAARs, Cumulative average abnormal returns

These findings contradict studies by Tan et al. (2002) who found that investors react negatively to announcements of seasoned equity offers because of overvaluation and agency hypothesis. Furthermore, Hao (2014) maintained that the SEO announcement signals firm overvaluation, resulting in a fall in the stock price and agency costs that exacerbate the misalignment of shareholder and manager interests. Therefore, the negative stock price reaction to SEO announcements reflects higher expected agency costs.

4.4 Medium-term Market Reaction to a Rights Offer

To ascertain how long it takes for the market to sustain a positive view about the rights offer, a medium-term market reaction was conducted over 30, 60, 90, 180, and 252 days post a rights offer announcement. Table 4.3 shows negative, albeit insignificant, market reaction over this period. These extended period adverse findings support Bray and Peterson (2009) who provided evidence of a long-term stock underperformance and post-issue declines in operating performance.

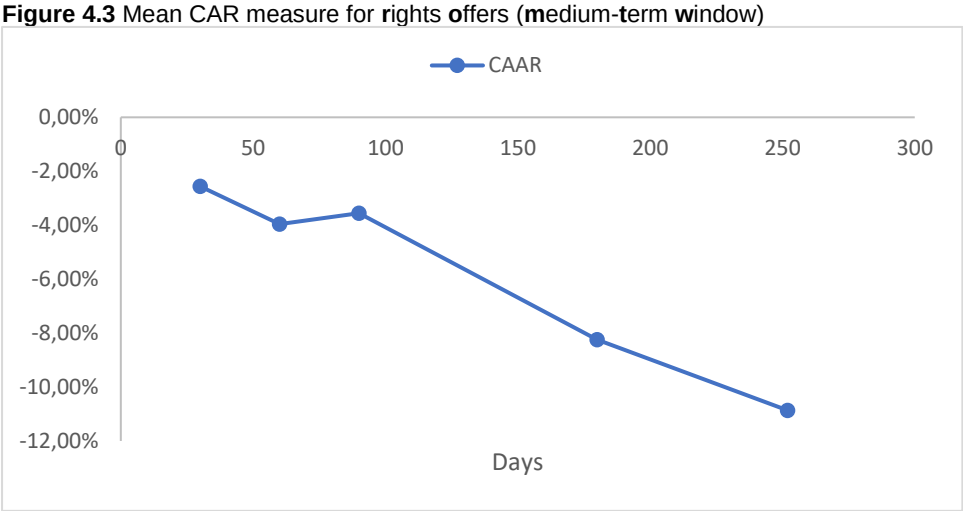
Table 4.3 Medium-term mean CAR measure for Rights Offers

Event Window	CAARs %	Median	SD	t	p	Significant
30	−2.56%	−0.01253	0.205471	−0.98947	16.29%	No
60	−3.96%	−0.00766	0.217166	−1.44982	7.59%	No
90	−3.56%	−0.00584	0.296975	−1.05986	14.65%	No
180	−8.24%	−0.07567	0.473033	−1.47999	7.19%	No
252	−10.87%	−0.09825	0.652651	−1.35794	8.99%	No

CAARs, Cumulative average abnormal returns; SD, Standard deviation

Figure 4.3 shows the medium-term market reaction to rights offer announcements.

Figure 4.3 Mean CAR measure for **r**ights **o**ffers (**m**edium-**t**erm **w**indow)



CAARs, Cumulative average abnormal returns

4.5 Chapter Summary

The findings and results chapter evaluated the significance of CARs for a rights offer event for a JSE-listed shares mainboard. The analysis covered capital raised from rights offers for the 01 January 2006 to 31 January 2020 period of assessment. The descriptive test analysis was conducted using a standard *t*-test analysis at a 95% significance level.

The findings revealed a significant CAR reaction of positive price movement during the event window and an insignificant adverse price movement in the medium-term period. The positive price movement around the event window could indicate a sound market environment for capital acquisition using rights offers. This form of capital acquisition gained traction in 2008, around the time of the global fiscal crisis, where the prime lending rate was at 15%, triggering companies to seek alternative finance.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter discusses and concludes the thesis. The chapter is organised as follows: Section 5.2 discusses the results, Section 5.3 concludes the thesis, and Section 5.4 presents further research.

5.2 Discussion

Previous JSE studies on rights offers and seasoned equity issues conducted around the late 90s up to the mid-2000s reveal a negative price reaction to rights offers. Bhana (1998) documented results of a significant price drop of 3.51% over the two-day announcement period of an equity issue, and Alston (1996) indicated a general negative price reaction to announcing a rights issue on the JSE because of dilution in earnings per share, regulations, and effects of floatation costs. Cotterell (2012) supported the adverse price movements of 3%–3.5% over a two-day announcement period for JSE-listed shares.

Da Cunha and Seetharam (2018) exposed different findings to negative price reactions by revealing that a behavioural and rational reaction driven by investor sentiment and concerns regarding information asymmetry or adverse selection and risks do not indicate a significant impact on the long and short-term performance of firms embarking on an SEO for JSE-listed shares. Therefore, the null hypothesis of no causality effect in the firm's stock price movements post-announcement of SEO event was maintained.

Contrary to popular findings in the early 90s and mid-2000s, this study indicates positive abnormal return reactions over the 11-day event window, starting from day −5 to day +5, with statistically significant results from days 3 to 5. Therefore, this study supports a different view of positive price reactions to rights offers for the South African market. The 2008/2009 fiscal crises posed a challenge to companies to seek alternative finance because of an exorbitant prime lending rate of 15% in 2008.

The current positive CAR results in this study for JSE-listed companies post a rights offer could be because of matured markets in dealing with rights offers. D'Mello et al. (2003) indicated that a firm with a previous track record in selling equity could often be subject to less information asymmetry because it is large and more likely to be followed by analysts and the popular press, or because investors and financial intermediaries have examined its performance each time it raised funds. The JSE platform and level of experts involved in the rights offer process, such as underwriters, might have given credibility to the process, which supports the positive abnormal returns findings of this study.

5.3 Conclusion

Mehar (2005) acknowledges that a rights offer is a mechanism that management can use as a source of capital finance among other alternative forms of equity finance, such as reserves, surplus, and IPO. Contrary to an adverse reaction, evidence gathered in this study indicates statistically significant positive results from day 3 to 5 for the sample period post-announcement of a rights offer over an 11-day event window from the anticipation period (day −5) to the adjustment period (day +5). However, in the medium-term, statistically insignificant negative price movement was observed. Ahmad et al. (2012) illustrated that all firms want to maximise shareholders' wealth; therefore, capital structure decisions are relevant because it can affect shareholders' wealth.

Although there was significant empirical evidence gathered for this study indicating positive price movements in the short-term period post-announcement, the empirical evidence was insignificant for the medium-term period. The CAR performance for the longer period of 180 days was −8.24%, and the results worsened on day 252 at −10.87%, eroding shareholder value over a longer assessment period.

Out of 162 rights offers raised in the sample period, 42% of companies that issued rights offers have been delisted from the JSE. This further raised a red flag to investigate whether the announcement of the rights offer by JSE-listed firms creates value for shareholders in the short-term and further assess the medium-term period.

Holderness and Pontiff (2016) revealed another point on whether creating shareholders' wealth is the main objective in issuing a rights offer by exposing that firms are under no legal obligation to be transparent about reporting shareholder participation in rights offerings, and many firms do not voluntarily reveal this information. When shareholders allow their rights to expire unexercised, there will be wealth transfers from them to participating shareholders and standby buyers or underwriters.

Bhana (1988) indicated that corporates move away from debt as a source of capital injection into equity capital because of a prime overdraft rate of 25% in early 1985 in South Africa. This provided an opportunity for listed companies to reduce their debt by substituting cheaper equity capital. History repeated itself because the systemic impact of the recent financial crisis resulted in a sharp increase in rights offer capital acquisitions in 2007 from R4,8bn to R21bn in 2008. This change might have been driven by the systemic effects of the 2008/2009 global fiscal crises, as most companies explored alternative finance channels due to the prime lending rate of 15% in 2008. In dealing with a crisis or other corporate needs, companies might seek unconventional ways in pursuit of finance, compromising shareholders' wealth and value.

These findings contribute to the existing body of literature of market reactions to a rights offer for JSE-listed shares. The period from 01 January 2006 to 31 January 2020 covered different economic cycles and systemic financial crashes, such as the fiscal and Brexit crises.

5.4 Further Studies

Further research could investigate the market reaction of rights offers around the Covid-19 pandemic crisis for JSE-listed shares.

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